

REMARKS

This application has been carefully reviewed in light of the Office Action dated August 25, 2006. Claims 1, and 4 to 9 are in the application. Claims 1 and 5 are independent. Reconsideration and further examination are respectfully requested.

Claim 5 was objected to for informalities. Amendments to Claim 5 are believed to obviate the objection. Accordingly, reconsideration and withdrawal of the objection are respectfully requested.

Claims 1, and 4 to 9 were rejected under 35 U.S.C. § 103(a) over European Patent Application EP 0752667 (Van Loo) in view of U.S. Patent No. 6,247,101 (Settles). Reconsideration and withdrawal of the rejections are respectfully requested.

Referring to the specific language of the claims, independent Claim 1 defines a bus control method for a bus, which is provided with a switch having a plurality of master ports for connecting a plurality of masters and a plurality of slave ports for connecting a plurality of slaves. The switch can establish connection paths between each of the plurality of masters and an arbitrary one of the plurality of slaves for transmitting and receiving a command, an address, and data via the switch. The method comprises a read command transaction step in which a first master initiates a read transaction with a first switch request for connecting with a first slave, the switch establishes a first connection path between the first master and the first slave, the first master issues a first address and a first read command to the first slave via the first connection path, and the switch releases the first connection path before read return data corresponding to the first address and the first read command is issued from the first slave. The method also comprises a read data transaction step in which the first slave issues a second switch

request for connecting with the first master after the first connection path is released in the read command transaction step, the switch establishes a second connection path between the first slave and the first master independent from the first connection path made in the read command transaction step, and the first slave issues the read return data to the first master via the second connection path. Before the read data transaction step is completed, a read command transaction step of a next read transaction can be initiated.

Independent Claim 5 defines a bus system comprising a plurality of masters, a plurality of slaves, and a bus that is provided with a switch. The switch can establish connection paths between each of the plurality of masters and an arbitrary one of the plurality of slaves for transmitting and receiving a command, an address, and data via the switch, in a read transaction which includes a read command transaction and a read data transaction. In the read command transaction, a first master initiates the read transaction with a first switch request for connecting with a first slave, the switch establishes a first connection path between the first master and the first slave, the first master issues a first address and a first read command to the first slave via the first connection path, and the switch releases the first connection path before read return data corresponding to the first address and the first read command is issued from the first slave. In the read data transaction, the first slave issues a second switch request for connecting with the first master after the first connection path is released in the read command transaction, the switch establishes a second connection path between the first slave and the first master independent from the first connection path made in the read command transaction, and the first slave issues the read return data to the first master via the second connection path.

Before the read data transaction is completed, a read command transaction of a next read transaction can be initiated.

The applied references are not seen to disclose or to suggest the features of independent Claims 1 and 5, and in particular, are not seen to disclose or to suggest at least the features of (i) a first master initiating a read transaction with a first switch request for connecting with a first slave, (ii) a switch establishing a first connection path between the first master and the first slave, and (iii) the first master issuing a first address and a first read command to the first slave via the first connection path.

On the contrary, Van Loo discloses, in the section titled “General Operation of Flow Control”, that (a) “[w]hen a master, e.g. master interface 110, has a transaction request to issue . . . [t]he request is sent from the master’s output queue 290 to the [system controller’s input queue]”, and (b) “then the [system controller] issues the transaction request”. (column 12, lines 11 to 17, and column 12, line 26 of Van Loo).

More specifically, Figures 4 to 7 and corresponding text of Van Loo disclose the operations of four different types of transactions in Van Loo’s system. In a memory read request, for example, “[w]hen a UPA master port such as port [sic, port] 630 has a read-from-memory transaction ready” then (a) “the read transaction is issued on the UPA_Addressbus from UPA port 630 to the system controller 650”, and (b) “[t]he memory cycle [i.e. RAS (read-address-strobe)/CAS (column-address-strobe) request issuance] is issued [by the system controller] over memory control bus 670 to the memory banks 610 . . . 620.” (See, Figure 4; column 18, lines 34 to 46 of Van Loo).

Thus, while Van Loo may disclose (a) a master issuing a read transaction to a system controller, and then (b) the system controller issuing the request to a slave, Van

Loo is not seen to disclose or to suggest (i) a first master initiating a read transaction with a first switch request for connecting with a first slave, (ii) a switch establishing a first connection path between the first master and the first slave, and (iii) the first master issuing a first address and a first read command to the first slave via the first connection path.

The remaining applied reference, namely Settles, is not seen to cure the deficiencies of Van Loo, either alone or in any permissible combination. Accordingly, independent Claims 1 and 5 are believed to be allowable.

The other claims in the application are each dependent from the independent claims and are believed to be allowable over the applied references for at least the same reasons. Because each dependent claim is deemed to define an additional aspect of the invention, however, the individual consideration of each on its own merits is respectfully requested.

No other matters being raised, it is believed that the entire application is fully in condition for allowance, and such action is courteously solicited.

Applicants' undersigned attorney may be reached in our Costa Mesa, California office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

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